

5505

U. S. COAST & GEODETIC SURVEY
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Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. <u>14</u> 5505
State <u>South Carolina</u>	
LOCALITY	
<u>Charleston, S. C.</u>	
<u>Dawho River, Watts Cut</u>	
1934	
CHIEF OF PARTY	
<u>Benjamin H. Hagg</u>	

U. S. GOVERNMENT PRINTING OFFICE: 1934

838

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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REG. NO. 5505

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 14

REGISTER NO. **5505**

State South Carolina

General locality Charleston, S. C.

Locality Dawho River, Watts Cut

Scale 1-5,000 Date of survey May, 1934

Vessel Shore Party No. 19

Chief of Party Benjamin H. Rigg

Surveyed by Ensign Edward B. Brown, Jr.

Protracted by Clifford J. Harryman

Soundings penciled by A. A. Lockerbie

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated October 10, 1933

Remarks:

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 14

DATE OF INSTRUCTIONS - October 10, 1933.

GENERAL DESCRIPTION - This portion of the inland waterway is narrow and crooked. It is a dredged canal, and six to eight foot reeds grow to the very edge of the steep mud banks lining the stream. This makes topography difficult.

The U. S. Engineers make periodic surveys in connection with their maintenance work. Their blueprint, enclosed, shows two areas recently surveyed. It was hoped that the dredging, to be done in the near future, would be completed before the sheet was submitted. Some irregularity in the bid caused delay. Upon completion of this work, the U. S. Engineers will no doubt resurvey the area dredged.

In view of the above information, and the fact that yachtmen steer a mid-channel course, it is felt that the amount of work on the hydrographic sheet submitted will prove adequate for charting purposes in this area. A detailed development of this stretch of waterway would entail an immense amount of topographic control and consequent large expenditures of time and money.

SURVEY METHODS - In Watts Cut in North Creek, hydrography is controlled by three point fixes taken on signals located by topography.

In the Dawho River, hydrography is controlled by three point fixes taken on signals spotted on the photographs and located by radial plot.

It will be noted that in many cases, sounding lines follow the contour of the waterway, and the boat sheet must be used as a guide in reviewing this sheet. In some cases it was found impossible to obtain a three point fix due to the crookedness of the waterway and the height of the reeds on the high banks bordering it. In these cases, positions were obtained by a single angle and a distance to the bank or to a nearby signal. If there is

any question in the mind of the reviewer, the boat sheet should serve as a final location.

The shoreline shown on the boat sheet was obtained from an enlargement of the 1/10,000 compilation sheet. This enlargement was made on celluloid by the Washington Office.

It will be noted that in several places, the channel is defined by a single line of soundings. The shoal soundings obtained on the lines on either side of this channel line happen to fall on the edge of the steep bank lining the channel. The channel is so narrow in these areas that a single line is considered an adequate determination on a 1/5,000 scale.

TIDES - Tide reducers for work on this sheet were obtained from portable automatic gauges located at Dawho Bridge, South Edisto River, and Pine Landing. Limits of various gauges are shown on the smooth sheet and boat sheet.

Values used for the gauges are as follows:

Dawho Bridge	M.L.W. 2.2
Pine Landing	1.9
S. Edisto R. (Mouth of Dawho)	1.32

STATISTICS -

Vol. No.	Statute Miles	No. Soundings	No. Positions
1	5.5	130	25
2	<u>27.5</u> 33.0	<u>1413</u> 1543	<u>213</u> 238

Respectfully submitted,

Edward B. Brown Jr.
Ensign Edward B. Brown, Jr.

Forwarded by,

Benjamin H. Rigg
Lt. Benjamin H. Rigg
Chief of Party.

HYDROGRAPHIC STATIONS
Located by Radial Plot

Dawho Cut

Station	As scaled	Corrected.
Man 32° 38'	1700.0	1692.3
80° 22'	(158)	(156.0)
Gul 32° 39'	319.0	318.0
80° 21'	(1248.0)	(1246.0)
For 32° 39'	461.0	460.0
80° 21'	(1390.0)	(1388.2)
Ken 32° 39'	1373.0	1373.7
80° 22'	(193.6)	(193)
Rust 32° 39'	144.0	143.3
80° 21'	(1707.0)	(1705.)
Ala 32° 39'	1534.0	1531.7
80° 22'	(32.0)	(32.0)
Rust 32° 39'	872.3	872.3
80° 22'	(976.0)	(976.0)
Ala 32° 39'	588.0	587.0
80° 22'	(977.0)	(976.7)
Rust 32° 39'	720.0	719.3
80° 22'	(1130.0)	(1129.0)
Ala 32° 39'	343.0	341.0
80° 22'	(1223.0)	(1222.7)
Bab 32° 39'	756.0	755.3
80° 22'	(1094.0)	(1093.0)
Cat 32° 39'	708.0	707.7
80° 22'	(858.0)	(856.0)
Dog 32° 39'	434.0	434.0
80° 22'	(1414.3)	(1414.3)
Ebb 32° 39'	692.0	691.0
80° 22'	(875.0)	(872.7)
Fox 32° 39'	142.0	142.0
80° 22'	(1706.3)	(1706.3)
Gin 32° 39'	824.0	821.7
80° 22'	(743.0)	(742.0)
Hat 32° 39'	214.0	213.0
80° 22'	(1636.3)	(1635.3)
Man 32° 39'	1043.0	1041.0
80° 22'	(524.0)	(522.7)
Gul 32° 39'	285.0	284.3
80° 22'	(1565.0)	(1562.0)
For 32° 39'	1284.0	1280.7
80° 22'	(283.0)	(283.0)
Ken 32° 39'	622.0	621.3
80° 22'	(1228.0)	(1227.0)
Rust 32° 39'	1386.0	1384.0
80° 22'	(180.0)	(179.7)
Ala 32° 39'	698.0	698.0
80° 23'	(1150.3)	(1150.3)
Bab 32° 39'	96.0	96.7
80° 23'	(1476.0)	(1467.0)
Cat 32° 39'	690.4	689.3
80° 23'	(1160.0)	(1159.0)
Dog 32° 39'	298.0	296.4
80° 23'	(1271.0)	(1267.3)

Station	As Scaled	Corrected
Tuf 32° 39'	408.3 (1442.7)	407.3 (1441.0)
80° 23'	352.4 (1220.0)	348.7 (1215.0)

From: L. S. S.

Survey No. H 5505

GEOGRAPHIC NAMES

Date. September, 17, 1934.

South Carolina

Chart No. 1239

Diagram No. 1239-2

Names underlined in red approved Sept. 18, 1934
H.B.

* Approved by the Division of Geographic Names, Department of Interior.

Ø, Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

[illegible]

November 15, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
2 volumes of sounding records for

✓ HYDROGRAPHIC SHEET 5505

Locality Dawho River and Watts Cut, South Carolina

Chief of Party: B. H. Rigg in 1934
Plane of reference is mean low water reading
2.0 ft. on tide staff at Pine Landing
8.0 ft. below B.M. 1

1.5 ft. on tides staff at S. Edisto River
7.1 ft. below B. M. 1

2.0 ft. on tide staff at Dawho Bridge
8.2 ft. below B.M. 1

Height of mean low water above plane of reference is 6.3 ft. at Pine
Landing and S. Edisto River, and 6.5 ft. at Dawho Bridge.

Condition of records satisfactory except as noted below:

H. H. Harnner

Acting Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. *5505*

The following statistics will be submitted with the
cartographer's report on the sheet:

Number of positions on sheet	<i>238</i>
Number of positions checked	<i>40</i>
Number of positions revised	<i>0</i>
Number of soundings recorded	<i>1543</i>
Number of soundings revised	<i>30</i>
Number of signals erroneously plotted or transferred	<i>0</i>

Date:

Verification by *Wallace A. Bruden*

Time: *20 $\frac{3}{4}$ hrs.*

Review by *P. J. Christman*

Time: *8 $\frac{1}{2}$ hrs.*

Field Records Report on H-5505.

Chief of party: B. H. Rigg
Protracted by: C. J. Harryman
Verified and inked by: W. A. Bruder
Surveyed in: May, 1934.
Surveyed by: E. B. Brown, Jr.
Soundings plotted by: A. A. Lockerbie.

1. The records conform to the requirements of the General Instructions. ✓
2. The usual depth curves were shown where possible. ✓
3. The field plotting was complete to the extent prescribed in the General Instructions. ✓
4. The verifier occasionally revised soundings penciled in the field due to:
 1. Line did not follow that on boat sheet.
 2. Time interval wrong due to omitting one sounding.
 3. Critical sounding not given preference.
5. Of the two adjacent sheets, H-5483 junction is complete and satisfactory. The other, H-5506, has not been inked. ✓
6. Remarks:

As per descriptive report, the sounding lines on the boat sheet were used as a guide.

~~Note at latitude 32°38'15", longitude 80°21'00", there is a creek shown on H-5483 and not on H-5505.~~

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5505 (1934)

Dawho River and Watts Cut, Charleston, South Carolina
Instructions dated October 10, 1933 (B. H. Rigg)
Surveyed in 1934

Hand Lead Soundings - Three Point Fixes on Shore Objects, Center Line of Channel, and Distances to Shore.

Chief of Party - B. H. Rigg.
Surveyed by - E. B. Brown, Jr.
Protracted by - C. J. Harryman.
Soundings plotted by - A. A. Lockerbie.
Verified and Inked by - W. A. Bruder.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual. A statement should have been made whether distances to shore are estimated or range finder distances.

2. Compliance with Instructions for the Project.

There are many portions of the Dawho River where additional lines of soundings would have given a better definition of the depth curves. The single lines of soundings in North Creek and the wider tributary creek of Dawho River, while probably sufficient for charting purposes does not give a complete delineation of the waterways. In this connection, attention is called to paragraph 3 of the descriptive report which states that a large amount of control would have been necessary in order to develop the waterway in detail.

3. Sounding Line Crossings.

No cross lines were run.

4. Depth Curves.

The usual depth curves can be adequately drawn except in the creeks where single lines of soundings were run.

5. Junction with Contemporary Surveys.

Junctions with H-5483 (1934) and H-5506 (1934) are satisfactory.

6. Comparison with Prior Surveys.

(a) H-1349a (1875-6).

The scale of the survey is 1-20,000. The part of the Dawho River corresponding to that shown on H-5505 (1934) has a single line of soundings. West of Long. 80-22 the channel is in good agreement. East of Long. 80-22 the channel is considerably shoaler

on the present survey but is still deeper than the controlling depth of the inland waterway in this general vicinity.

A single line of soundings is shown in North Creek but the depths are much greater than those shown on the 1934 survey. Apparently the straightening of the creek channel and the opening of Watts Cut by dredging have caused changes in the other parts of the creek as well.

7. Comparison with Chart No. 1239.

Within the area of the present survey the chart does not show depths in the river channels. The controlling depth is shown by notes, based on reports by the U. S. Engineers (See chart letter 475 of 1934).

In Dawho River, 7 feet could be carried through instead of the 6 feet now shown on the chart. This is also in accord with the U. S. Engineer's report.

For North Creek the survey shows a controlling depth of $5\frac{1}{2}$ feet in Long. 80-22-50, but possibly the 6 foot controlling depth given by the U. S. Engineer's report could be carried through the narrow channel designated therein (70 feet down to 45 feet) for the Intra-coastal Waterway between Charleston and Beaufort. The Descriptive Report states that bids for dredging were under consideration and dredging operations would be resumed at an early date.

8. Field Plotting.

The protracting was excellent.

In plotting the soundings, the field draftsman did not follow the boat sheet closely as recommended in the Descriptive Report. A few soundings were spaced wrong and the critical sounding was not always given the preference.

9. Additional Field Work Recommended.

Because of the limited controlling depths and the economic unimportance of the area mentioned in paragraph 2, this review, no additional work is recommended.

10. Superseding Old Surveys.

Within the area covered, the present survey supersedes the following survey for charting purposes.

H-1349a (1875-6) In Part.

11. Reviewed by - R. J. Christman, December, 1934.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. C. Lobbat
Chief, Division of Charts.

B. B. Under
Chief, Section of Field Work.

G. H. de
Chief, Division of H. & T.

25 Jan 13, 1936
L.B.

Applied to Chart 838 January 22, 1936 W.A. Bruders
Applied to Chart 793 June 30, 1936 H.E. Mae Ewen
" " " 1239 Apr. 1937 J.M.A.

K →
J